ENVIRONMENTAL & REGULATORY SERVICES DIVISION
201 East Washington Avenue
P.O. Box 7969
Madison, Wisconsin 53707

Wisconsin
Department of Commerce

Program Letter
Storage Tank Regulation Section
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Wisconsin ILHR 10 Flammable & Combustible Liquid Storage System Required Information for Vapor Recovery System Applications

VAPOR RECOVERY SYSTEMS ARE TO BE SUBMITTED TO ERS FOR PLAN REVIEW.

This document is designed to assist the applicant in the preparation of a Vapor Recovery system installation application. The current application form (ERS-9) does not have a designation box for these systems. Please indicate type of system to be installed at top of form or in scope of work. General submittal guidelines can be found by requesting ERS-10025-P, corrosion requirements can be found by requesting ERS-10116-P. These documents are not intended to supersede the requirements of ILHR 10.

Please provide the following information on applications.

New installations:

A scaled drawing of the site indicating proposed location of Stage II piping, pipe sizes, piping slope, burial depth, and required components. Note: if primary supply piping is also being installed, the plans submitted must also meet the other requirements of ILHR 10. This information may be incorporated in a proposed tank/line installation submittal. All Stage II piping configurations must conform to the requirements of the respective CARB order. Stage I configurations must coincide with the Stage II requirements. Drop out tanks and like devices **are not acceptable methods** of achieving proper pipe slope when installing new tanks and pipe in conjunction with the Stage I and II systems.

or

Existing installations:

Where vapor recovery piping was previously installed, and you intend to rely on the original plan review for the approval of the recovery piping, you must provide an unaltered copy of the original approved plan that provides the piping information and shows the location of the Stage II pipe system, all pipe sizes and related components, and the date of vapor recovery pipe installation.

(**NOTE:** If the plans were approved after August of 1992 provide STATE PLAN NUMBER instead of the approval date.)

Applications for Stage I and Stage II systems to existing tanks **must include tank ID number**.

If the original plan did not indicate the location and specifications outlined for "new installations" above, the plans will not satisfy the plan review requirement.

ALL APPLICATIONS MUST INCLUDE:

- Dispenser configuration drawing indicating make and model of the unit
- Materials specification list that includes but is not limited to:
  a. Type of system to be installed (balance, assist, etc.).
  b. Executive order number for the proposed system.
  c. Manufacturer, model number and California Fire Marshal number for all required components of the system.

Stage I configuration and CARB number that complies with the Stage II system executive order.
a. Single point coaxial

b. Single point coaxial with poppet
c. Dual point

Installation of above ground components on previously installed vapor lines require a flex connector and shear section under the dispenser. Information regarding these components must be included with the materials list. Attachment or alteration of piping at tank requires the installation of a flex connector. (ILHR 10.51, NFPA 30A 4-3.7)

Installation of above ground operational components on a previously installed vapor line must include documentation that existing pipe configuration meets current CARB requirements for system being installed.

Installation of inactive vapor pipe must include the CARB Executive Order used as design criteria for the piping system.

The use of flexible connectors between the vapor recovery shear section and the dispenser is allowed, and must be listed for vapor use. Underwriters Laboratories will not take a position regarding the type of connector to be used. NFPA 30A 4-3.7 requires a shear section or flexible connector be used. The Department requires that a listed flex connector be installed between the underground pipe and the shear section. The shear section must be listed for vapor use (**documentation must be provided),** and designed to restrict vapors from escaping to the atmosphere if the dispenser is impacted in a manner that would cause product lines to shear.

There is a question regarding the operation of the shear section when a flexible connector or other type of non-rigid material is used between the vapor shear section and the dispenser vapor connection, and the two parts of the valve are not appropriately anchored. If the shear section is listed for vapor use and the manufacturer accepts responsibility for the installation design of the shear section and:

1. Has developed specific written instructions for anchoring of the shear section in a vapor recovery system that uses a flex connector above the shear section, **or**

2. The shear section is anchored at the top and bottom using brackets and clamps according to the manufacturer's instructions and in the same manner as the product supply side. (Note: The anchoring cannot be dependent on the use of rigid piping.)

The installation would be in compliance with the code.

If the manufacturer's instructions reference connection to solid piping only for anchoring or if the anchoring system is not detailed by the shear section manufacturer the use would not comply with the code.

If the flexible connector or shear section is not listed for use in a vapor system the installation would not comply with the code.

All vapor recovery installation applications must include reference to the shear section, method of anchoring and method of connection between dispenser and shear section. If a flexible connector or hose is used the manufacturer, model and verification of proper listing must be provided.

FEES

- The following fee structure will apply to the installation of Stage II Vapor Recovery systems submitted to ERS for plan review.
- Plan submittals to Local Program Operators (LPOs) **are not** required to include the groundwater surcharge.
  Exception: Plans with tank(s) 5,000 gallon capacity or greater submitted to Western Wisconsin Inspection, or the Madison or Milwaukee Fire Departments.
- Installation of a Stage II system in conjunction with the installation of tanks and/or lines.

  Fees will remain consistent with current "system" review and installation fees. No additional fee is required.
- Installation of single trunk Stage II **piping only**, system not connected at dispenser or placed in service.
- Installation of dispensers and related equipment to a previously installed line not indicated on approved plan. All piping and components must be indicated on current submittal.
  Fees will be charged at the single system installation rate and a groundwater fee will be charged.

Plan Examination.....$ 35.00
Site Inspection.....$100.00
Groundwater Surcharge..$100.00
TOTAL.....$235.00

- If multiple systems are installed (a separate line for each product or tank), fees will be on a per system basis the same as multiple product tank/line installations.
- Installation of an operational one trunk Stage II system, constructed after a site is in operation: Fees will be based upon the one line installation rate. Please see the example above.
- Installation of dispensers and related equipment to an existing, previously approved vapor line: Fees will be charged as an upgrade. No groundwater surcharge will be required.

EXAMPLE
Plan Examination.....$ 22.00
Site Inspection.....$ 43.00
TOTAL.....$ 65.00

NOTE: When a drop out tank is used to achieve the proper slope of the vapor line for systems installed on existing
tanks, it must be shown on the plans and be included in the calculation of fees as would any other underground storage tank. Drop out tanks or similar devices **are not acceptable** with new tank and pipe installations except as specifically noted on a current CARB order.